

Application No.: 10/776,576
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Amendments to the Claims:

This listing of claims will replace all prior revisions and listings of claims in the subject application, and please amend the claims as follows:

Claim 1. (Previously presented): A method of making an ePTFE tubular structure comprising the following steps:

forming a tube of polytetrafluoroethylene;

longitudinally stretching said polytetrafluoroethylene tube to form an expanded polytetrafluoroethylene tube, wherein said expanded polytetrafluoroethylene tube is comprised of fibrils oriented in a longitudinal direction of said tube and nodes oriented in a circumferential direction of said tube;

placing the expanded polytetrafluoroethylene tube circumferentially exterior to a longitudinal foreshortening and radially expanding mechanism;

applying radial pressure from said longitudinal foreshortening and radially expanding mechanism; and

radially expanding and longitudinal foreshortening said expanded polytetrafluoroethylene tube over said longitudinal foreshortening and radially expanding mechanism to reorient said fibrils non-longitudinally to form an ePTFE tubular structure with reoriented fibrils.

Claim 2. (Previously presented): The method according to claim 1 wherein said expanded polytetrafluoroethylene tube is heated to a temperature of between about 86°F and 650°F during radial expansion.

Claim 3. (Original): The method according to claim 2 wherein said reoriented fibrils are hingeably rotated about said nodes.

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Claim 4. (Currently amended): The method accordingly to claim 1 wherein said ePTFE tubular structure with reoriented fibrils exhibits increased longitudinal elongation and radial expansion and recovery properties as compared to said expanded polytetrafluoroethylene tube.

Claim 5. (Original): The method according to claim 1 wherein said reoriented fibrils are substantially the same length of said originally longitudinally oriented fibrils.

Claim 6. (Currently amended): The method according to claim 4 wherein said ePTFE tubular structure with reoriented fibrils is capable of being longitudinally elongated to at least about 1.5 times its original length.

Claim 7. (Currently amended): The method according to claim 6 wherein said ePTFE tubular structure with reoriented fibrils is capable of being elongated to at least about 2.0 times its original length.

Claim 8. (Currently amended): The method according to claim 7 wherein said ePTFE tubular structure with reoriented fibrils is capable of being longitudinally expanded to at least about 2.5 times its original length.

Claim 9. (Currently amended): The method according to claim 4 wherein said ePTFE tubular structure with reoriented fibrils is capable of radially expanded to at least about 1.5 times its original radius.

Claim 10. (Currently amended): The method according to claim 9 wherein said ePTFE tubular structure with reoriented fibrils is capable of radially expanded to at least about 2.0 times its original radius.

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Claim 11. (Currently amended): The method according to claim 10 wherein said ePTFE tubular structure with reoriented fibrils is capable of radially expanded to at least about 2.5 times its original radius.

Claim 12. (Currently amended): The method according to claim 4 wherein said ePTFE tubular structure with reoriented fibrils exhibits said recovery properties in the absence of elastic recovery.

Claim 13. (Original): The method according to claim 1 wherein said nodes have a first length after said longitudinal stretching and a second length after said radial pressure, wherein said second length is greater than said first length.

Claim 14. (Previously presented): The method according to claim 1 further including a step of suspending and heating said expanded polytetrafluoroethylene tube after longitudinal expansion and prior to placing said expanded polytetrafluoroethylene tube on said longitudinal foreshortening and radially expanding mechanism.

Claim 15. (Original): The method according to claim 14 wherein said heating step increases structural integrity of said ePTFE tubular structure.

Claim 16 (Previously presented): A method of making an ePTFE tubular structure comprising the following steps:

forming a tube of polytetrafluoroethylene;

longitudinally stretching said polytetrafluoroethylene tube to form an expanded polytetrafluoroethylene tube, wherein said expanded polytetrafluoroethylene tube is comprised of fibrils oriented in a longitudinal direction of said tube and nodes oriented in a circumferential direction of said tube;

placing the expanded polytetrafluoroethylene tube circumferentially exterior to a longitudinal foreshortening and radially expanding mechanism;

applying radial pressure from said longitudinal foreshortening and radially expanding mechanism;

radially expanding and longitudinal foreshortening said expanded polytetrafluoroethylene tube over said longitudinal foreshortening and radially expanding mechanism;

heating said expanded polytetrafluoroethylene tube to a temperature of between about 86°F and 650°F during radial expansion; and

reorienting said fibrils non-longitudinally to form an ePTFE tubular structure with reoriented fibrils that are hingeably rotated about said nodes.

Claim 17 (Previously presented): The method according to claim 16 wherein the step of heating said expanded polytetrafluoroethylene tube is at a temperature of between about 200°F and 350°F during radial expansion

Claim 18 (Previously presented): A method of making an ePTFE tubular structure comprising the following steps:

forming a tube of polytetrafluoroethylene;

longitudinally stretching said polytetrafluoroethylene tube to form an expanded polytetrafluoroethylene tube, wherein said expanded polytetrafluoroethylene tube is comprised of fibrils oriented in a longitudinal direction of said tube and nodes oriented in a circumferential direction of said tube;

placing the expanded polytetrafluoroethylene tube circumferentially exterior to a longitudinal foreshortening and radially expanding mechanism; and

applying radial pressure from said longitudinal foreshortening and radially expanding mechanism to radially expand said expanded polytetrafluoroethylene tube over said longitudinal foreshortening and radially expanding mechanism to reorient said fibrils

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non-longitudinally to form an ePTFE tubular structure with reoriented fibrils that fibrils are hingeably rotated about said nodes;

wherein said ePTFE tubular structure has an altered nodal orientation having a greater length between said nodes after radial expansion than before said longitudinal.

Claim 19 (Previously presented): The method according to claim 18 further comprising:
heating said expanded polytetrafluoroethylene tube to a temperature of between about 86°F and 650°F during radial expansion.

Claim 20 (Previously presented): The method according to claim 1 wherein said reoriented fibrils of said ePTFE tubular structure are longitudinally straighter than said fibrils of expanded polytetrafluoroethylene tube.